

[0023] FIG. 3C is a diagram of a graphical user interface separated into a standard region and a control region for the electronic device of FIG. 3A.

[0024] FIG. 3D illustrates an exemplary media player interface for the electronic device of FIG. 3A.

[0025] FIG. 4 illustrates an embodiment of an electronic device having a display and a touch sensitive bezel according to certain teachings of the present disclosure.

[0026] FIG. 5 schematically illustrates components of the electronic device of FIG. 4.

[0027] FIG. 6 illustrates a process of operating the touch sensitive bezel in flow chart form.

[0028] FIG. 7 illustrates a process of operating the electronic device in flow chart form.

[0029] FIG. 8 illustrates a process of operating the electronic device having an orientation sensor in flow chart form.

[0030] FIGS. 9A-9B illustrate an electronic device with an orientation sensor in two different orientations.

[0031] FIG. 10 illustrates an embodiment of an electronic device capable of disregarding certain types of touch data.

[0032] FIG. 11 illustrates an embodiment of an electronic device having a touch sensitive bezel around the display and having addition touch sensitive pads incorporated throughout various sides of the housing for the device.

[0033] FIG. 12 illustrates some other possible bezel arrangements for an electronic device according to the present disclosure.

[0034] FIG. 13A illustrates an embodiment of a touch sensitive bezel having a plurality of conductive pads, a control module, and sensors according to certain teachings of the present disclosure.

[0035] FIG. 13B illustrates a circuit diagram of portion of the control module for the touch sensitive bezel of FIG. 13A.

[0036] FIG. 14 illustrates an embodiment of a touch sensitive bezel having force detection and location layers according to certain teachings of the present disclosure.

[0037] FIGS. 15 through 19 illustrate an embodiment of a multimedia device having a touch sensitive bezel and a user interface according to certain teachings of the present disclosure.

[0038] While the subject matter of the present disclosure is susceptible to various modifications and alternative forms, specific embodiments thereof have been shown by way of example in the drawings and are herein described in detail. The figures and written description are not intended to limit the scope of the inventive concepts in any manner. Rather, the figures and written description are provided to illustrate the inventive concepts to a person skilled in the art by reference to particular embodiments, as required by 35 U.S.C. § 112.

#### DETAILED DESCRIPTION

[0039] Co-pending U.S. patent application Ser. No. 11/367,749, which has been incorporated herein by refer-

ence in its entirety, discloses electronic devices capable of configuring user inputs based on how the devices are to be used. The electronic devices may be multi-functional hand-held devices. The electronic devices have a user interface that requires no (or at most only a few) physical buttons, keys, or switches so that the display size of the electronic devices can be substantially increased. Preferably, the electronic devices eliminate such physical buttons, keys, or switches from a front surface of the electronic device so that additional surface area becomes available for a larger display on the electronic device. Ultimately, this strategy allows the electronic device to house a substantially full screen display. As used herein, a full screen display is a display that consumes, or at least dominates, a surface (e.g., a front surface) of the electronic device.

[0040] FIG. 3A is a perspective view of a multi-functional hand-held device 50 having a housing 52 and a substantially full screen display 60. To accommodate the full screen display 60, the multi-functional hand-held device 50 is preferably configured with a limited number of physical buttons. Because a limited number of physical buttons are provided, the display 60 of the hand-held device 50 preferably uses a touch screen as the primary input mechanism for the electronic device 50. The touch screen of the display 60 is a transparent touch sensing mechanism that is positioned over or incorporated into the display 60. Typically, the touch screen display 60 works in conjunction with a graphical user interface (GUI) presented on the display 60. For example, the GUI may present an on-screen button or user control on the display 60, and the touch screen display 60 may detect when a user presses the on-screen button (e.g., places their finger or stylus over the on-screen button). Aspects of the touch screen display 60 and GUI for the electronic device 50 are described in greater detail below.

[0041] The hand-held device 50 may be constructed with only cross-functional physical buttons, i.e., there are no buttons dedicated to individual device functionalities. These types of buttons may include power buttons and hold switches. In another embodiment, the hand-held device 50 may not include any physical buttons at all. In some embodiments, the physical buttons are limited to only the sides 56 and back surface 58 of the hand-held device 50. In other embodiments, the physical buttons of the hand-held device 50 are limited to the upper and lower portion of the sides 56 so that there are no buttons in the regions of the sides 56 where a user would physically support the device 50 (i.e., holding region). In still other embodiments, the physical buttons may be located on the front surface 54, but only in the bezel 55 surrounding the display 60. In some embodiments, the buttons may be located on only the top and bottom surfaces 57 of the device 50.

[0042] As shown in the embodiment of FIG. 3A, there are no physical buttons on the front surface 54 of the housing 52 so that the front surface 54 can be used almost entirely for the display 60. Further, because the side surfaces 56 are used for grasping the device 50, it may be preferred to leave the sides surfaces 56 free from buttons to prevent accidental actions in the event a user inadvertently presses a button while supporting the device 50. Although the top and bottom surfaces 57 would not typically be used to hold the device 50, these surfaces 57 are not ideal locations for buttons that are often actuated because it would be awkward to reach these buttons when operating the device 50 with one hand.